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Notice of Allowability

Application No.

10/658,006

Applicant(s)

ZHANG ET AL.

Examiner

Ernest G. Therkorn

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to September 9, 2003; December 29, 2003; and April 30, 2003.
2. ☒ The allowed claim(s) is/are 1-16 and 27-38.
3. ☒ The drawings filed on 09 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Ernest G. Therkorn
Primary Examiner
Art Unit: 1723

Art Unit: 1723

The petition under 37 CFR 1.48 c of December 29, 2003 has been approved.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

In the specification, page 14, after line 18, the following has been inserted:

- - The following two paragraphs are from column 8, lines 17-55 of U.S.

Patent No. 6,627,882, formally incorporated by reference U.S. Patent Application 09/748,518:

Art Unit: 1723

The present invention relates to an electrospray device for spraying a fluid which includes an insulating substrate having an injection surface and an ejection surface opposing the injection surface. The substrate is an integral monolith having either a single spray unit or a plurality of spray units for generating multiple sprays from a single fluid stream. Each spray unit includes an entrance orifice on the injection surface; an exit orifice on the ejection surface; a channel extending between the entrance orifice and the exit orifice; and a recess surrounding the exit orifice and positioned between the injection surface and the ejection surface. The entrance orifices for each of the plurality of spray units are in fluid communication with one another and each spray unit generates an electrospray plume of the fluid. The electrospray device also includes an electric field generating source positioned to define an electric field surrounding the exit orifice. In one embodiment, the electric field generating source includes a first electrode attached to the substrate to impart a first potential to the substrate and a second electrode to impart a second potential. The first and the second electrodes are positioned to define an electric field surrounding the exit orifice. This device can be operated to generate multiple electrospray plumes of fluid from each spray unit, to generate a single combined electrospray plume of fluid from a plurality of spray units, and to generate multiple electrospray plumes of fluid from a plurality of spray units. The device can also be used in conjunction with a system for processing an electrospray of fluid, a method of generating an electrospray of fluid, a method of mass spectrometric analysis, and a method of liquid chromatographic analysis.

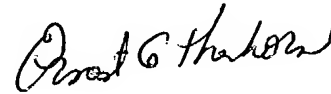
Another aspect of the present invention is directed to an electrospray system for generating multiple sprays from a single fluid stream. The system includes an array of a plurality of the above electrospray devices. The electrospray devices can be provided in the array at a device density exceeding about 5 devices/cm², about 16 devices/cm², about 30 devices/cm², or about 81 devices/cm². The electrospray devices can also be provided in the array at a device density of from about 30 devices/cm² to about 100 devices/cm². - -

Authorization for this examiner's amendment was given in a telephone interview with Joseph M. Noto on June 17, 2004.

In the preliminary amendment of September 9, 2003, after "2002", - - , now abandoned - - has been inserted.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
June 17, 2003